WEST

| Generate Collection | Print |

Search Results - Record(s) 1 through 4 of 4 returned.

☑ 1. Document ID: US 6006033 A

L2: Entry 1 of 4   File: USPT   Dec 21, 1999

US-PAT-NO: 6006033
DOCUMENT-IDENTIFIER: US 6006033 A

TITLE: Method and system for reordering the instructions of a computer program to optimize its execution

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Heisch; Randall Ray	Austin	TX		

US-CL-CURRENT: 717/158; 711/125, 711/134

ABSTRACT:

A system and method are provided that allows the results of an instruction trace mechanism to globally restructure the instructions. The process reorders the instructions in an executable program, using an actual execution profile (or instruction address trace) for a selected workload, to improve utilization of the existing hardware architecture. The reordering of instructions is implemented at a global level (i.e., independent of procedure or other structural boundaries which maximizes speedup) running on various hardware platforms and adds the ability to preserve correctness and debuggability for reordered executables. An unconditional branch instruction is added at the memory locations where reordered instructions previously were stored. When a dynamic branch occurs, the program will attempt to access the instruction at the original address and the unconditional branch directs the program to the reordered location of the instruction and program integrity is maintained.

9 Claims, 16 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 11

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☑ 2. Document ID: US 5774724 A

L2: Entry 2 of 4   File: USPT   Jun 30, 1998

US-PAT-NO: 5774724
DOCUMENT-IDENTIFIER: US 5774724 A

TITLE: System and method for acquiring high granularity performance data in a computer system

DATE-ISSUED: June 30, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heisch; Randall Ray	Georgetown	TX		

US-CL-CURRENT: 717/129

ABSTRACT:

A microprocessor performance monitor and instruction address break point facility
are interconnected to provide finer granularity and performance monitoring. The
microprocessor is initialized to collect processor statistics preselected prior to
performance monitoring. Application start and stop instruction breakpoint addresses
are preselected from a software program bounding instructions for which such
statistics are desired. An exception handler is installed for instruction address
breakpoints (IAB), enabling and disabling the performance monitor and stop
addresses, respectively. The IAB register is then initalized to the start address,
and the statistics counters are cleared. Upon starting the application, when the
application start address instruction is executed, the breakpoint handler obtains
control and enables the performance monitor counters, which count the desired
statistics after returning from the breakpoint handler. Before returning, the
handler sets the IAB register to the stop address. When the application stop address
is encountered, the breakpoint handler disables the performance monitor counters,
and rearms the start address in the IAB register. The performance monitor counters
are then read to determine the desired statistics for the specific sequence of code
within the boundaries of the start and stop addresses in the application.

27 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☑ 3.   Document ID: US 5613118 A

L2: Entry 3 of 4   File: USPT   Mar 18, 1997

US-PAT-NO: 5613118
DOCUMENT-IDENTIFIER: US 5613118 A

TITLE: Profile-based preprocessor for optimizing programs

DATE-ISSUED: March 18, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heisch; Randall R.	Austin	TX		
Kilpatrick; Paul J.	Austin	TX		

US-CL-CURRENT: 717/158

ABSTRACT:

The present invention is an system and method for optimizing a program, having
qualified elements, at the source level. The method includes the steps of
instrumenting each path of the qualified elements to create an instrumented program,
executing the instrumented program to produce instrumentation information for each
of the paths, analyzing the instrumentation information, and in response to the
analyzing step, restructuring the program to create an optimize program.

1 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

☑ 4.   Document ID: US 5212794 A

L2: Entry 4 of 4   File: USPT   May 18, 1993

US-PAT-NO: 5212794
DOCUMENT-IDENTIFIER: US 5212794 A

TITLE: Method for optimizing computer code to provide more efficient execution on computers having cache memories

DATE-ISSUED: May 18, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pettis; Karl W.	San Jose	CA		
Hansen; Robert C.	Santa Clara	CA		

US-CL-CURRENT: 717/153; 714/38

ABSTRACT:

The method uses statistical information obtained by running the computer code with test data to determine a new ordering for the code blocks. The new order places code blocks that are often executed after one another close to one another in the computer's memory. The method first generates chains of basic blocks, and then merges the chains. Finally, basic blocks that were not executed by the test data that was used to generate the statistical information are moved to a distant location to allow the blocks that were used to be more closely grouped together.

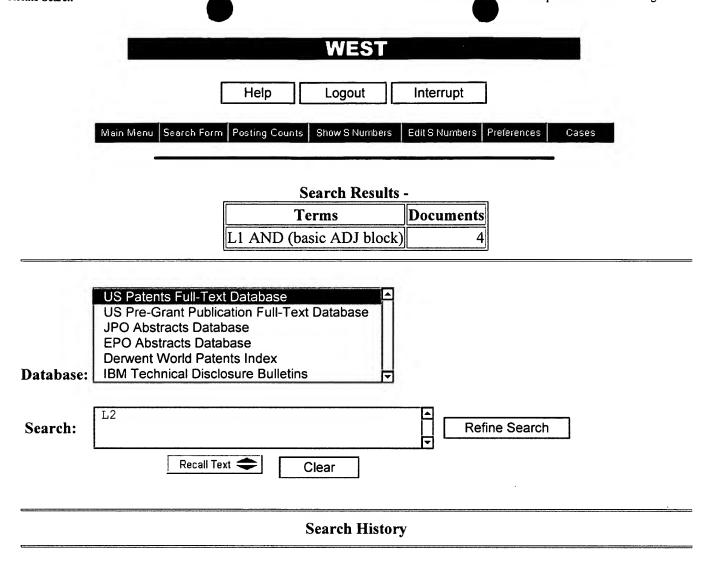6 Claims, 7 Drawing figures
Exemplary Claim Number: 1,5
Number of Drawing Sheets: 5

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

| Generate Collection | Print |

Terms	Documents
L1 AND (basic ADJ block)	4

Display Format: | REV | | Change Format |

Previous Page   Next Page

WEST

| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
L1 AND (basic ADJ block)	4

Database:
- US Patents Full-Text Database
- US Pre-Grant Publication Full-Text Database
- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search: L2

[Refine Search]

[Recall Text] [Clear]

Search History

DATE: **Monday, November 10, 2003**   Printable Copy   Create Case

Set Name	Query	Hit Count	Set Name
side by side			result set
	DB=USPT; PLUR=NO; OP=OR		
L2	L1 AND (basic ADJ block)	4	L2
L1	heisch.in. OR pettis.in.	38	L1

END OF SEARCH HISTORY

WEST

| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
ingberg.xa. AND hot.ti.	1

Database:

- US Patents Full-Text Database
- US Pre-Grant Publication Full-Text Database
- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search: L6

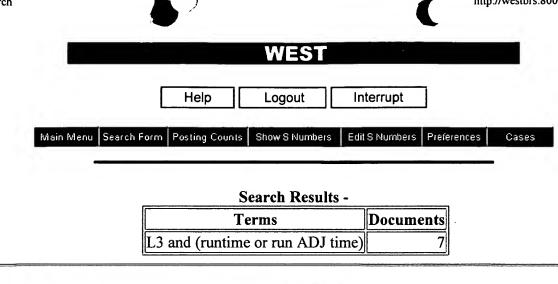| Refine Search |

| Recall Text | Clear |

Search History

DATE: **Monday, November 10, 2003**   Printable Copy   Create Case

Set Name	Query	Hit Count	Set Name
side by side			result set
	DB=USPT; PLUR=NO; OP=OR		
L6	ingberg.xa. AND hot.ti.	1	L6
L5	L1 AND ((717/???)!.CCLS.)	5	L5
L4	L3 AND (call aDJ path)	0	L4
L3	L1 AND profile	17	L3
L2	L1 ADN profile	240578	L2
L1	(van ADJ dyke.in.)	217	L1

END OF SEARCH HISTORY

WEST

Help	Logout	Interrupt

Main Menu	Search Form	Posting Counts	Show S Numbers	Edit S Numbers	Preferences	Cases

Search Results -

Terms	Documents
L3 and (runtime or run ADJ time)	7

Database:

```
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
```

Search:

```
L4
```

Refine Search

| Recall Text ⬍ | | Clear |

Search History

DATE: Monday, November 10, 2003   Printable Copy   Create Case

Set Name Query	Hit Count	Set Name
side by side		result set
DB=USPT; PLUR=NO; OP=OR		
L4 L3 and (runtime or run ADJ time)	7	L4
L3 L2 and 11	11	L3
L2 ((717/158)!.CCLS.)	121	L2
L1 ((717/153)!.CCLS.)	85	L1

END OF SEARCH HISTORY